AMENDMENTS TO THE SPECIFICATION:

Please amend the specification as follows:

Please amend paragraph [0008] to read as follows:

In accordance with embodiments of the present invention, a transceiver system is presented that has a small form factor. A transceiver system according to the present invention includes a receiver optical sub assembly, a transmitter optical sub assembly, and an electronic interface coupled to the receiver optical sub assembly and the transmitter optical sub assembly, wherein the electronic interface utilizes a split ground arrangement in a multi-layer circuit board assembly. The result of the split ground, multi-layer circuit board arrangement is that a high-voltage bias supply required for high-speed transceiver functions can be ~~isolated~~shielded from the transceiver. Further, in some embodiments, internal conducting layers can operate as shields to further assist in ~~isolating~~shielding the receiver functions from the high-voltage signal generation.

Please amend paragraph [0024] to read as follows:

An electronic interface circuit according to the present invention can be built on multi-level board **130**. Multi-level board **130**, then, includes electrical connections to ROSA **110** and to TOSA **120**. Additionally, multi-level board **130** includes an electrical connection **131** for making electrical connections external to transceiver **100**. Electrical connection **131** can be any electrical connector, for example a PCB edge finger connector. Further, transceiver **100** may include covers **132** and **133** for protecting and shielding the electrical connections between ROSA110 and the electronic interface on multi-layer board **130** and TOSA **120** and the electronic interface on multi-level board **130**. An embodiment of ROSA **110** that can be utilized

in transceiver system **100** is disclosed in U.S. ~~application~~Application Ser. No. 10/764,979~~{Attorney Docket No. 09136.0005}~~, which is filed concurrently with the present disclosure, and is herein incorporated by reference in its entirety.

Please amend paragraph [0029] to read as follows:

FIG. 3 shows an embodiment of multi-level board **130** that illustrates the configuration of electronic interface **200**. In the embodiment of multi-level board **130** shown in **FIG. 3**, six layers of board are formed and coupled together. High-voltage power supply **260** is formed on layer **301**, the top layer, of multi-level board **130**. Transmitter **230** and receiver **240** are formed on layer **306**, the bottom layer, which is on the opposite side of multi-layer board **130**. Additionally, as shown in **FIG. 2**, the ground of receiver **230** and on connector **210** is split from the ground of transmitter **240** in order to help ~~isolate~~shield receiver **230** from the remainder of electronic interface **200**. The grounds of high-voltage power supply **260** and microcomputer system **250** can be the same as the ground of transmitter **240**. Although a six-layer stacking embodiment is illustrated in this disclosure, other layer arrangements can be utilized. In accordance with some embodiments of the present invention, a transceiver system includes an electronic interface arranged on a multi-level board where high-voltage power supply **260** is electrically ~~isolated~~shielded from transmitter **240** and receiver **230**.

Please amend paragraph [0030] to read as follows:

Therefore, in the embodiment illustrated in **FIG. 3**, layer **301** will include metallic traces for the circuitry of high-voltage power supply **260**. Layer **301** may also include metallic traces for portions of connector **131** and connectors **220** and **210**. Layer **302** includes metallic vias to provide electrical connection from underlying boards to portions of connector **131** and

connectors **220** and **210** (not shown). Layer **303** includes vias for electrical connections between boards and a copper ~~isolation~~shielding plane **307**, which may occupy some or all of layer **303**. Layer **304** includes metallic traces to provide interconnects between circuit elements. Electrical connections can be made through vias in other board layers. Layer **305** provides electrical vias between layer **304** and layer **306**. Layer **306** provides metallic traces for the circuitry of, for example, receiver **230** and transmitter **240**.

Please amended paragraph [0032] to read as follows:

In some embodiments of multi-level board **130** according to the present invention, copper ~~isolation~~shielding plane **307** is a ground plane that may be floating with respect to the split-ground of electrical interface **200**. Copper ~~isolation~~shielding plane **307** is positioned between high-voltage power supply **260** and the circuitry of transmitter **230** and **240** in order to provide electrical ~~isolation~~shielding. Electromagnetic signals emanating from high-voltage power supply **260**, then, are blocked by ~~isolation~~shielding ground plane **307** before interfering with the signals of receiver **230** and transmitter **240**. Each ground, the split grounds of electronic interface **200** and copper ~~isolation~~shielding plane **307**, are coupled to ground external to multi-layer board **130**.

Please amend paragraph [0033] to read as follows:

As such, high-voltage power supply **260** and high-speed receiver **230** and transmitter **240** are assembled on multi-layer board **130** and the internal construction of multi-layer board **130** provides shielding to ~~isolate~~shield high-voltage power supply **260** from high-speed receiver **230** and transmitter 240. Multi-layer board 130 also utilizes "blind vias" for interconnects between layers.

Please amend paragraph [0043] to read as follows:

FIG. 7 illustrates the arrangement of vias **700** on layer **303**. Additionally, layer **303** can provide a copper plane **701** to provide electrical ~~isolation~~shielding under high-voltage power supply **260**.

Please amend paragraph [0045] to read as follows:

FIG. 9 illustrates vias **900** on layer **305**. Further, layer **305** can also include further copper plane ~~isolation~~shielding **902** for further ~~isolation~~shielding of receiver **230** and transmitter **240**.

Please amend the abstract to read as follows:

A low form-factor transceiver system appropriate for long-reach optical communications is presented. In accordance with the present invention, an electronic interface to a receiver optical sub assembly (ROSA) and a transmitter optical sub assembly (TOSA) is arranged on a multi-layer board to electrically ~~isolate~~shield the transmitter and receiver portions from a high-voltage power supply, which is utilized to provide bias voltages to optical detectors in the ROSA. In some embodiments of the invention, the high-voltage power supply is arranged on a top layer while the transmitter and receiver are arranged on a bottom layer in a split-ground arrangement. Layers between the top layer and the bottom layer include at least one ground plane and provide vias for electrical connections.